

The Highwayman

Route No. 4
Between Middletown and Betsy Ross Tavern

The Highwayman is Out
For More and Better Roads
in New Jersey

January, 1922
Vol. I
No. 6

One New Year's Resolution is Enough

Getting around among the boys, I've heard some New Year's resolutions.

They make good reading—I wish there was room for a complete list of 'em here!

But say, even if I introduced you to every one of these Good Intentions now, how many of 'em would you be able to recognize by this time next month? Most of 'em, by that time, will be just *paving material*. (You've heard what a certain place—not under the jurisdiction of the Highway Department—is paved with!)

Fact is, men, most of us make too darn many resolutions. They're all about *details*. We let the Main Thing slide.

The Main Thing, is to *keep your mind on the job*.

"The job" may be play; or work. Personal or business. Hands, or head. Planning, or executing. For the passing minute; or for months ahead. But—keep your *head* on it!

Most accidents are the direct results of a *wandering mind*. It may be an extra good mind, even a brilliant one—but if it won't stay where you put it, till the job is *finished*, it's not much use. Either to your employer, or to you.

Also, most *poor work* is the direct result of a wandering mind. It comes back to the



The Highwayman Wants to Know—
"Which Road Is the More Expensive?"

same thing.

Make only *one* resolution for the New Year—and then stick like the devil to that one. Don't let anything or anybody, pry you loose from it.

"Keep your mind on your job!"

Which Is the Most Expensive?

In this issue you will find the road program for the coming year.

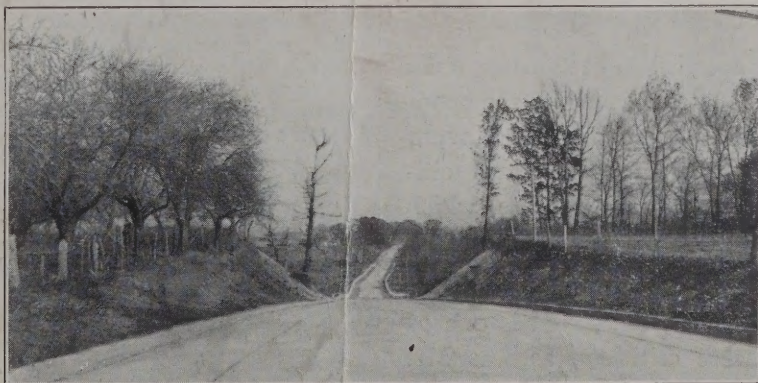
Some folks will read it with the greatest satisfaction. They will see that it means so many more links completed in the carefully thought out *system* of highways for the State.

But there will be some kickers—some of the fellows who never see anything in any public improvement, except a few dollars added to their taxes.

Just the other day I met up with one of these guys. His farm has been for sale for two years. It happens to be on one of the State Highways. Last summer this road was hard-surfaced. Our friend spent most of his time, while this work was being done, sitting on the porch and hollering about what it would cost.

So far as I know, this man's taxes are no bigger this year than they were last. But I do happen to know that he raised the price of his farm \$2000.00.

Can you beat it?



This bit of road is an important link in the Highway System of South Jersey, but before it was hard surfaced it was almost impassable for several weeks each year.
(Route 6—Between Salem and Mullica Hill at Old Mau's Creek)

The Highwayman

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Published Monthly By The

State Highway Department, at Trenton, N. J.

The HIGHWAYMAN will be sent free upon application to any citizen of New Jersey who is interested in "More and Better Roads For New Jersey!"

THE HIGHWAYMAN

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Executive Secretary	- - - - -	EDWARD W. O'BRIEN

Let Us Hear from You

The work of the State Highway Department is for the people—all the people—of the State.

Every man in the Highway Department, we believe, is conscious of the fact that he is working for *the public*. And we want them to be proud of that fact, and anxious to put their very best effort into the work.

But "the Public" is a vague, indefinite sort of a "boss". It is hard to make that "personal contact" which means so much in the ordinary lines of business.

That is why we are glad to get a letter from "our boss" such as that published on the opposite page. We have never met Mr. Lovett. We understand that he is an esteemed citizen of the northern part of the State, which he has done much to help make more beautiful.

We would like to hear from *you*—and your letter will be just as welcome, if it is one of suggestion, or sincere criticism, as was Mr. Lovett's letter of appreciation.



C. F. Bedwell

Construction Engineer of the Highway Department

C. F. Bedwell hails from Ironton, Ohio:

After graduating from McGill University, Montreal, Canada, in 1905, Mr. Bedwell accepted a position with the Public Service Railway Company of New Jersey on engineering and construction work. He resigned from this company to become Assistant Chief Engineer in charge of construction work for the Railway Company.

While connected with the Public Service Company, Mr. Bedwell had charge of the design and construction of the Public Service Terminal Building at Newark, the cost of which was approximately \$5,500,000. Besides being the trolley terminus for a number of the lines of the Public Service Railway Company, this building also houses the entire executive and general offices of the Public Service Corporation and allied companies.

Mr. Bedwell resigned from the Public Service Railway Company in October, 1920, to take up his work with the New Jersey State Highway Department as Engineer of Construction.



NOTICE TO READERS

This issue of THE HIGHWAYMAN was held up by the *Engravers' Strike*. Our engravings were not delivered until the 21st of January.—Ed.



MONMOUTH NURSERY

Little Silver, N. J.
December 22, 1921.

Mr. T. J. Wasser, Chief Eng.,
State Highway Department,
Trenton, N. J.

Dear Sir:—This letter is written for no reason other than that the writer desires to express his appreciation of the splendid service you and your assistants have been rendering us, not only in this vicinity, but throughout many other parts of the State, in improving our roads.

I hope it will be gratifying to you to learn that to everyone to whom I speak regarding this matter they invariably express a thorough appreciation of all that is being done. It seems that everywhere I go I hear a good word spoken for Mr. Edwards, whom I understand is a brother of our Governor. In this man it would appear that you have a splendid lieutenant, one whom I am told is "on the job at all times and actually works harder than those who are "under him."

I hope this letter will not appear to you to be uncalled for. It is simply a case of a tax payer feeling that he is getting good big value for what he is paying for, and wanting to do justice by those who are making these conditions possible.

Sincerely and respectfully yours,

LCL/JP
C/by/EO'B.

J. T. LOVETT,
Per (Signed) L. C. Loren.



Col. Walter F. Whittemore

Another Member of Your Highway Commission

Before Col. Whittemore was appointed to the Highway Commission, he had had a long training and experience in work which made his opinions of great value to the rest of the Commission.

He graduated from N. Y. University in '83. He is a member of the American Society of Civil Engineers; a life member of the Marine Society of New York, American Red Cross Society; and the Sussex County Historical Society; also a director of the Sussex National Bank of Newton.

The Col. built the big North German Lloyd Docks in this country; and was then sent to Germany to tell 'em how to build the docks there.

Col. Whittemore was commissioner Lieutenant-Colonel Corps of Engineers in 1907. Governor Edwards appointed him to the New State Highway Commission in June, 1920.

The Highwaygirls Give the Highwaymen a Christmas Party

Wednesday evening, December 28, will go down in history as an important date, because "Peggy" Barnett; Grace Williamson, "Margaret" Watson, "Kitty" Laughry, et. al. arranged such a splendid party and reception for the white-collar contingent of the Trenton office force in the old Chamber of Commerce room on the Ninth Floor of the Broad Street Bank Building.

The place was artistically decorated, producing a very pleasing appearance.

The distribution of Christmas gifts was the prime feature of the evening. Art Bullock impersonated "Old Santa" himself and announced that all those favored with a present would arise and come forward when their name was called and open the package in full view of the assembled merry-makers. The gifts were as a whole very appropriate. Mr. Reed received a package which was alleged to have been sent by Mr. Harold Noyes of the Weather Bureau, containing a quantity of very good imitation snow with the compliments of the season. (Mr. Reed is the father of Snow Removal Forces).

Mr. Norman Applegate received a very appropriate present in the form of a large engagement ring, in order that he might better take care of his many engagements, not forgetting the regular engagement he has outside of office hours.

Lee Grover received a very handsome automobile with two chauffeurs, which he was directed to use on his trips to and from South River to see Commissioner Burton.

"Santa" himself received a very nice present. In attempting to unwrap it, it slipped from his hands and fell to the floor, causing a vibration of the entire building, due to the impact of the heavy object contained therein. Upon opening the package a nice new automobile jack came into view. The story that goes with this jack is as fol-

NEW JERSEY STATE HIGHWAY DEPARTMENT

December 1st, 1920

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HON. EDWARD I. EDWARDS, Governor

The State Highway Commission
and

THOMAS J. WASSER, State Highway Engineer

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G. R. MOORE, Ass't Construction Engineer

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C. A. MEAD	-	-	Bridge Engineer
THOMAS GEORGE	-	-	Acting Supt. of State Labor
C. A. BURN	-	-	Northern Division Engineer
H. D. ROBBINS	-	-	Central Division Engineer
J. A. WILLIAMS	-	-	Southern Division Engineer

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EDWARD E. REED, Assistant State Highway Engineer

A. W. MUIR	-	-	Superintendent of Maintenance
N. C. APPEGATE	-	-	Superintendent of Equipment
A. D. BULLOCK	-	-	Projects Engineer
H. C. SHINN	-	-	Engineer of Special Assignments

TESTING LABORATORY

R. B. GAGE, Chemical Engineer

J. G. BRAGG	-	-	Senior Testing Engineer
F. H. BAUMANN	-	-	Senior Testing Chemist

lows: On a couple of occasions when Art had Car No. 15 out, he experienced some difficulty in making the jacks furnished with the car to perform their natural function of raising the wheel up so that a tire could be changed. On one of these occasions, he was accompanied by a man from the Department, whose word was considered trustworthy, and the fact that the jacks did not work was verified by this man. In spite of the experience of these two men with the said jacks, the Equipment Division still maintains that the jacks would work. The presentation of the new jack in this appropriate manner makes a fitting climax to the controversy, although Art Bullock maintains he cannot work the new jack because there is no handle with it.

Music for the dancing was furnished by a large Victrola and refreshments were served to the innerman by the young ladies giving the party.

Miss Barnett and "Miss" Birch of the Department gave a very interesting dance.

"Here's the Bond— but Where's the Road?"

Hordes of autos now behind us,
We should build our roads to stay
And departing leave behind us
Kinds that rain won't wash away.

When our children pay the mortgage
Father made to haul the load,
They'll not have to ask the question;
"Here's the bond, but where's the road?"

—CIVIS, In Bridgeton Evening News.

The Highwayman

Highway Contractors' Column

*"It ain't the guns nor armament,
Nor the funds that they can pay,
But the close co-operation
That makes them win the day;
It ain't the individual,
Nor the army as a whole,
But the everlasting teamwork
Of every bloomin' soul."*

—Rudyard Kipling.

The above sentiment is just what has made the Highway Contractors' Association of New Jersey a huge success this first year of its existence. By legitimate cooperation among its members, between them and members of the State Highway Department, and between them and county officials and taxpayers, the Association has accomplished many things this year for the betterment of the highway industry at the least possible cost to the taxpayers.

Just to enumerate a few of the major accomplishments achieved by the Association in 1921:

1. It was instrumental in having five (5) laws enacted in the Legislature of 1921 that were a benefit to the State, Counties, Municipalities, and to the contracting business.

2. It was largely instrumental in having the Public Utility Commission render a decision that the railroads should refund 25% on moneys paid them on shipments of sand, gravel and broken stone from August 26, 1920, to June 30, 1921.

3. By the above decision it has secured approximately \$25,000 refund for its members from the railroads.

By just mentioning the above, we think you'll agree with us that such achievements by co-operation is sufficient justification for the existence of such an organization as the Highway Contractors' Association of New Jersey.

It is firmly believed by members of this Association that the "Heads I win and tails you lose" clauses that were contained in specifications in years gone by are rapidly being eliminated by the Highway Commission, and that the highway construction business is thereby growing into a more conservative *business* and less of a *gamble*.

At the annual meeting and banquet held in Trenton, Dec. 10, 1921, the same officers were elected for 1922 that held office during 1921. They are:

JOHN M. KELLEY, *President*
JOSEPH F. BURKE, *Vice-President*
JAMES J. BARRETT, *Treasurer*
A. B. WHELAN, *Secretary*
A. V. BARRETT, *Executive Secretary*

A Little Of This and That

PRESIDENT KELLEY: "We certainly welcome Barney Tighe in the Association."



Here's a good stunt! This sign shows at a glance how to "leave town" in the right direction. Other cities please copy!

LOU WHELAN: "She criticized my apartment and I knocked her flat."

BILL McDONALD: "I guess if you fellows look over the work of this year, you'll find that we are well up in the list of record breakers." We'll say so, Bill.

ED. HUMPHREY: "Gee! I fully intended to attend that meeting."

MIKE LAPRETE: "Y'betcherlife I'll see that Nesto joins our Association."

O. G. JULIAN: "Certainly there ought to be a few changes in the specifications."

RAY BONHAM: "I sent that postal card and forgot to send myself to the Annual Meeting."

SAM IRWIN: "I'll say we've got some organization."

ALEX. REED: "We'll be there alright!" You were, Alex.

HENRY SIGAFOOS: "Oh boy, that's good stuff!" (???)

PETE STAUB: "I bid low enough for me."

THOMPSON & GLICKMAN: "This reparation check looks good to us."

BILL TURKINGTON: "I can't seem to keep from under that table."

JOE BURKE: "Now, *Contractors*, listen!"

TOM WASSER: "Some of you contractors remind me of what France wants from Germany: More marks and fewer remarks." Whatdy'mean, Tom?

HARRY LEE: "The contracting industry is not a *game*, but a *business*." That's the right sentiment, Harry.

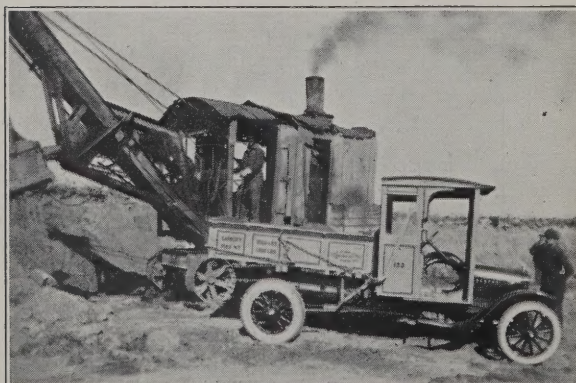


15,000 Killed— Mostly from Carelessness

Statistics sent out by the American Road Builders Association in connection with their Annual Convention held in Chicago from January 16 to January 20, give some very interesting facts regarding the number of accidents at grade crossings. An investigation has shown that one motorist in every three is careless at grade crossings approaching the railroad tracks at a reckless speed and without taking due notice of approaching trains.

In 970 cases in which motorists ran in front of the trains 136 persons were killed and 405 were injured. In 490 cases motor cars stalled on the crossing and were demolished. Forty-three cars actually collided with the danger signals.

An investigation conducted recently by the Maryland State Roads Commission demonstrated that most highway accidents occur on long stretches of road instead of at the curves and are due to speeding or reckless driving, rather than skidding.



Road Department Steam Shovel excavating gravel for resurfacing road between Manasquan and Belmar. Truck waiting to receive load.

Summary of Work Accomplished by State Labor Division

Year Ending Dec. 31, 1921,
Route 5, Section 2—Budd
Lake-Drakestown.

The section of this road built by inmate forces is 3.80 miles long, and is part of the Notcong-Hackettstown highway. It was built of Portland Cement Concrete, is 20 ft. wide, 6 in. & 8½ in. thick, and is reinforced with steel wire mesh. Work was started in April 1920, at the beginning of the current year was 10% completed, and was opened to the public in October, 1921. Inmates from the New Jersey State Reformatory at Rahway were used on this work, and proved entirely satisfactory and efficient, a daily average of 100 men being used during the construction season. To accommodate these men a complete camp was built at Budd Lake, consisting of dormitory, guards' quarters, kitchen, garage, and complete water and sewage systems.

The principal construction items on this job in addition to the bridges were:

- 21,000 cu. yds. of earth excavation.
- 2,000 cu. yds. of rock excavation.
- 30,000 cu. yds. of extra embankment.
- 14,000 lin. ft. of ditching.
- 45,000 sq. yds. of reinforced concrete.
- 8,000 lin. ft. of French drain.
- 2,000 lin. ft. of guard rail.

Route 9, Sections 1 & 2 Perryville-West Portal

This section of highway is 4.3 miles long, and will complete the mountain section of Route 9, which connects Elizabeth and Phillipsburg via Somerville and Clinton. The pavement will be Portland Cement Concrete 20 ft. wide, reinforced with steel mesh. The portion of the work assigned to the inmate forces included drainage, grading and bridge work, the paving contract having been given to a contractor because the Department of Institutions and Agencies was unable to furnish inmates from the State Prison in sufficient numbers to warrant the undertaking of that portion of the contract by inmate forces. The construction work was started in July, 1919, and at the beginning of the current year was 75% completed. The inmate labor contract was completed on November of this year, the principal construction items in addition to the bridge work being:

- 60,600 cu. yds. of earth excavation.
- 6,200 cu. yds. of rock excavation.
- 4,100 cu. yds. of extra embankment.
- 2,600 cu. yds. of ditching.
- 14,000 sy. yds. of grubbing.
- 20,000 sq. yds. of French drain.
- 1,100 lin. ft. of 12 in. to 40 in. R. C. pipe drains.
- 11,000 lin. ft. of fence re-location.
- 5,000 sq. yds. of sod stripping.



An "elevating grader" with 10-ton Holt tractor.
Mr. Wilson in the saddle, and R. Salter holding it up.

Route 1, Section 6, Greenwood Avenue, Trenton.

This improvement is .9 miles long, and is that portion of Greenwood Avenue between the Mercer County line and Nottingham Way. Due to lack of funds for this project and the inability of the Department of Institutions and Agencies to furnish a sufficient number of inmates from the State Prison for labor, the bridge and drainage work only was complete this year. Work was started in October 1920, and completed in January 1921, with mixed inmate and local labor. The principal construction items in addition to the bridge were:

- 2,000 lin. ft. 15 in. and 18 in. underdrain.
- 400 lin. ft. 12 in. underdrain
- 17 manholes and catch basins.

Woodbridge Avenue, Section 3, Rahway Reformatory Section.

This project consisted of .66 miles of 20 ft. wide Portland Cement Concrete pavement 6 in. & 8½ in. thick, beginning at the intersection of Woodbridge Avenue and the Rahway road, and running past the Rahway Reformatory to the Sound Shore railroad tracks, and included three concrete entrances to the Reformatory. The work was completed between March and May of this year.

Route 1, Sections 9, 10 & 11 Rahway-Elizabeth

These sections extend along Rahway Avenue from Milton Avenue, Rahway, to the Elizabeth City Line. The drainage and bridge work, which was allotted to the State Labor Division was started in October, 1920, and completed in February, 1921, inmate labor from the Rahway Reformatory being used to good advantage on the work. The principal construction items in addition to the bridges were:

- 17,500 lin. ft. of French drain
- 1,560 lin. ft. 15 in. and 18 in. storm water drain
- 32 catch basins and manholes
- 36 lamp holes
- 2 reinforced box culverts.

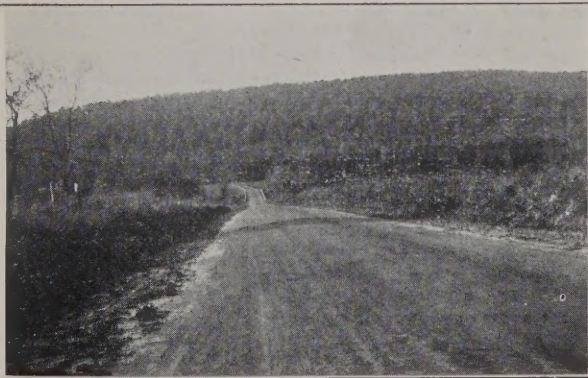
Route 4, Section 6, West Long Branch

The sharp intersection at the junction of Norwood Ave. and Cedar Lane on the main highway between New York, Newark and the shore was eliminated by cutting away the corner of H. T. Parson's Shadow Lawn Estate. New concrete curbing was put in, and the old blue stone flag relaid after being cut to curve, and the grading completed. Local labor was used on this work.

Route 4, Section 3, South Amboy

This improvement consisted of an open ditch 800 ft. long, necessitating removal of 1000 cu. yds. of earth excavation and was constructed with local labor. This ditch was necessary to drain a large area of low land which flooded with water and retarded the action of the drainage system on the new concrete road.

Editor's Note—Other work done by State Labor Division will be described in next issue.



Concrete Road from Bridgeville to Hope, N. J., and scene beyond—Washington on Macadam road near Oxford Mountain

The Highwayman

New Bridge to Eliminate Dangerous Curve on Way to Atlantic City

Every motorist knows to what extent especially sharp turns slow up his progress; or when a sharp turn appears unexpectedly gives him a shock and necessitates fast thinking and quick action on his part in order to avoid an accident. Such a condition as described above has existed for a long time on Route No. 4, just north of New Gretna, at what is known as Job's Creek Bridge. Approaching this bridge in the direction of Atlantic City one does not realize that the south end of the bridge marks the beginning of a thirty-five degree turn. This combined with the fact that the bridge at this point is not wide enough to allow two vehicles on it at a time, has made it a dangerous spot to be remembered.

We understand that several fatal accidents have happened at this point. We are glad to inform motorists on their way to and from Atlantic City or other local points that this dangerous condition will be eliminated by the construction of a new bridge early next year. We hope and expect this project to be completed in time for the spring and summer traffic.

The fill approaches for the new bridge on the changed alignment and easier curve have been made for some time, so that it should be settled ready for surface paving at the time the bridge is completed. Elimination of other sharp turns along this route are under consideration. In many cases the attitude of property owners from whom property has to be acquired to make improvements at dangerous turns affects the progress of the work to a great extent. The Department wishes to express its appreciation for the very fair treatment which our representatives have been accorded by the majority of property owners, where they have been met upon a fair basis in our negotiations for the acquirement of property, thereby contributing to the general welfare of the State at large.



The Value of War Surplus Material in Snow Removal

The photo below shows one of the 10-ton Holt Tractor Plows used on Snow Removal.

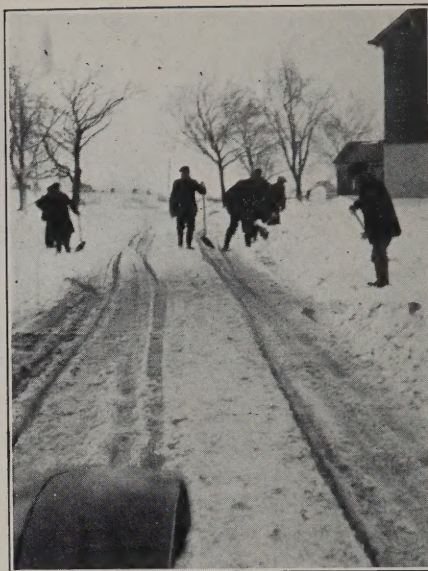
Snow removal was started in New Jersey in 1919 with twelve truck plows. For the winter of 1921-1922, there are assigned to this work, eighty-two truck plows, two tractor locomotive type plows, three rotary snow brooms, and fifteen maintenance patrol units equipped with tractor and road machines. Approximately seven hundred and ninety miles of highway are being taken care of by the above.

The above extensive program is made possible by the use of War Surplus Equipment, practically all truck plows being mounted on trucks received from the Government. The balance of the equipment has been purchased with State funds. The equipment used in snow removal is the equipment that has been used throughout the active season on maintenance and road construction and would ordinarily be idle and in dead storage, were it not for the snow work. If it were necessary to hire, equip, and store an amount of equipment equivalent to the above, the cost to the State for rental alone, exclusive of all labor and supplies, would be approximately \$175,000 per year.

Probably the most interesting part of the Snow Removal from the equipment point of view, is the equipping of the trucks for snow work. Trucks are brought in from various locations around the State around the middle of November, and the entire shop forces put on this work. Approximately two weeks are required to attach the plows and equip same and make proper adjustments that are necessary before the plows are sent out. This year approximately ninety per cent. of the plows were equipped and distributed on the Snow Removal Sections by December 1st, the balance, trucks that required heavier repairs than the average, were sent out early in December.

Awaiting call to snow duty.

N. C. APPLGATE, Superintendent of Equipment.



The old way (by hand) slow and—

Snow Removal Saves Pavement

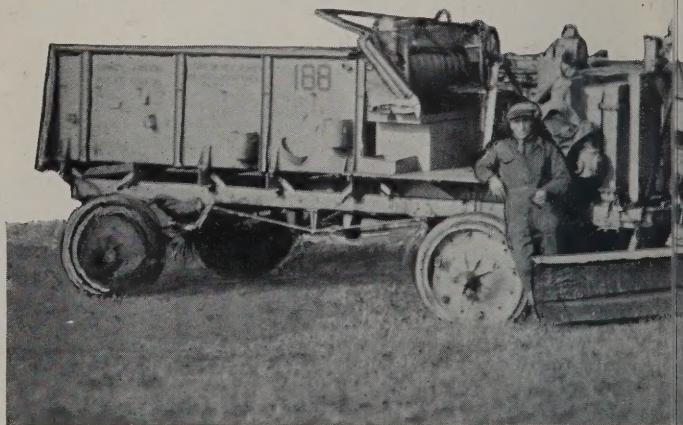
Our first snow fall of the season and its prompt removal had no doubt brought to mind of many of your readers the heavier snows of last winter and the successful manner in which they were handled by the Highway Department.

It will be recalled that very little inconvenience was suffered by autoists traveling our State Highways, yet the expenditures were insignificant as compared with the benefits derived from uninterrupted traffic on State truck lines.

These benefits while not readily expressed in dollars and cents are not the only ones derived by snow-removal. The removal of snow of whatever depth from the paved portions of the highway has a direct bearing upon the wearing qualities of the pavement itself. The benefit is two-fold.

First, it facilitates drainage. We can all of us recall the days before any organized attempt was made at snow removal. Then, the first vehicle thru, after a snowfall, led the way for all others. Deep ruts were formed which were both wheel tracks and drainage channels. No attempt was made to open ditches and traffic had to get along the best way possible until the county authorities dug out deep drifts and opened ditches. Many times, however, this was after melting snow had made rivers of the wheel tracks and sloughs of the low places. The effect upon the sub-grade and its bearing power was in many, many cases disastrous.

Second, it distributes traffic. As pointed out above, snowfall on the highway causes traffic to travel in the ruts formed, thereby concentrating within certain narrow



Tom Wasser's new slogan is "keep the roads open." Plows are started before the snow



expensive, with traffic held up.

spaces the weight and wear that would otherwise be distributed over the entire paved width. The effect of this concentration is marked in varying degrees in all types of pavement from concrete to gravel. In the concrete pavement it means spalled joints, cracked slab corners and wheel-tracked surface. In the bituminous pavement surface badly rutted and broken, while with the gravel roads oftentimes the "bottomless pit".

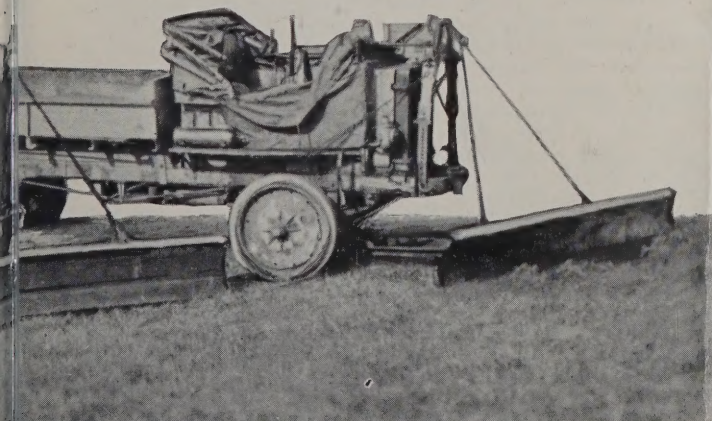
The direct benefits of snow removal to the pavement itself is more readily seen by the layman in the case of gravel roads, where constant maintenance is the price of easy riding. Here the prompt removal of each snowfall makes it possible for the roadman to keep the surface in fairly good condition throughout the winter; a condition that would be impossible if each snow fall were left to be removed by a rise in temperature or rainfall.

Thus it can readily be seen that prompt removal of snow from all classes of pavement is not only a great benefit to the traveling public, but a benefit to the pavement itself, and last but not least a saving in the cost of maintenance and reconstruction. In plain English it's a "money saver."

H. D. ROBBINS, *Division Construction Engineer.*

Removal of Snow as It Affects Sleighs

In the north and north-west parts of the State our attention has been called to the difficulty experienced by farmers who find it necessary to use sleighs over the little traveled by-roads from their farms or homes to the main



like the above (Nash quads with Good-Roads snow plows)
w stops, will do the trick

highway, with their load of milk or farm products when it becomes practically impossible for them to continue over the highway which has been cleared of snow. The same situation exists, we are informed, with regard to the town merchant in transporting his goods to the farmer who lives on the little traveled by-roads.

In order to solve this problem in an effort to make the highways useful to all of the people all of the year, we have written to several of our neighboring states to find out what they do under the circumstances. One State has tried out the experiment of rolling the snow in order to compact it with the idea that it would then be fit for either wheel or sleigh traffic. It is reported that where there is no heavy truck traffic this has proved more satisfactory than scraping. On the other hand, if there is any degree of heavy traffic it cuts through the rolled snow and makes conditions worse than ever. The erection of snow fences was mentioned as being a help to prevent snow drifting to any considerable depth in road cuts. Another State in commenting upon their snow removal operations states that where the snow removal has been at all successful it has been in those sections where all of the snow was removed from the pavement. The removal of all the snow from the pavement has a decided good effect upon the condition of the road and its maintenance cost and life, in addition to the advantages of having the road opened to traffic throughout the year. It is pointed out that leaving any snow on the pavement at all establishes a very dangerous condition for the traffic using the highway in addition to forming ruts due to the snow which has a disastrous effect upon the pavement.

It is pointed out further that milk routes are usually formed along the highways where the milk is picked up by trucks at points where it is left by the farmer's vehicle. This would seem to be a solution for the farmer's difficulty by a cooperative movement along the line suggested. Where enough snow has been left to pack down to two inches it was found that the two inches of compacted snow soon melted leaving the pavement bare or becoming very slippery, causing a very dangerous condition.

The majority opinion expressed by other States is that snow removal must, to be successful, include the removal of all snow from the highway. The net problem to face is whether snow removal is profitable, considering that by far the greater percentage of wheeled vehicles are used in the present day and the additional help that can be afforded to these vehicles by the removal of snow in addition to the very beneficial effect the snow removal has upon the pavement, there can be no doubt that removal of snow from the highway serves the large majority of people using them to great advantage.

Snow Removal by Machinery

The photo at the left shows some Nash-Quads ready for snow duty with Good Roads snow plows in place ready for action. Seeing these snow pictures remind us of the little snow flurry we had on Sunday, December 4. The Weather Bureau from the nature of reports which they received could not advise the Highway Department whether the snow would amount to anything or not. It seemed to be a fifty-fifty chance that it would amount to something. It was finally decided to call out the snow removal forces, because the beginning of the snow is oftentimes the most critical time. If the equipment does not start out when there is two or three inches of snow on the ground, the snow may become deep enough to prevent successful removal by mechanical methods and, therefore, necessitate the very expensive work of hand removal in places.

State Highway Engineer Wasser decided that it was in the interest of economy to start the work of snow removal organization to work after three or four inches of snow had fallen for the reasons stated above and due to the fact that a wet snow might freeze on the pavements and if additional snow should come it would cause great inconvenience and danger to traffic. After it became apparent that the snow was over Sunday evening word was sent out to the headquarters of the various contractors and snow removal outfits to put up their equipment for the night.

—H. C. S.

The Highwayman

1922 Program State Highway Reimbursement Construction

EXTRACTS FROM RESOLUTIONS OF COUNTIES

Atlantic County, Route 4—Said portion of Route 4 between Smithville and the Mullica River Bridge by the way of Johnstown, about **3¾ Miles**

Bergen County, Route 10—That portion of Route No. 10, being Bergen Turnpike in Little Ferry, Ridgefield Park and Ridgefield, also that portion of that part of the route known as the Blue Route from the easterly end of Brook Lane to Anderson Avenue to Fort Lee.

Bergen County, Route 10—That portion of Route No. 10, being Essex Street and Hudson Street in Hackensack, called also Bergen Turnpike. **6 Miles**

Camden County, Route 3—That portion of Route 3 from Camden City Line to the present concrete pavement southeast of Berlin. **13 Miles**

Cape May County, Route 14—Route 14, for three miles or more south of Cape May Court House. **4 Miles**

Cumberland County, Routes 6 & 15—That portion of Route No. 6 of the State Highway System beginning at the dividing line between the counties of Cumberland and Salem and extending over what was formerly known as the Shiloh Turnpike, via the village of Shiloh, to the City of Bridgeton, a distance of approximately six miles. Grading. **6 Miles**

That portion of Route 15 of the State Highway System beginning at the connecting point with Route 6 of the State Highway System at East Bridgeton, and extending eastwardly over what is commonly known and designated as the Bridgeton and Millville Turnpike, to the paved surface of said State Highway on west Main Street in the City of Millville. **10 Miles**

Gloucester County, Route 6—Route 6, Mantua Avenue from end of improved Topeka pavement northwardly to Salem Avenue, and on Broad Street from northerly edge of bridge over Woodbury Creek northwardly to the W. J. & S. R. R. **1.5 Miles**

Gloucester County, Route 6—Route 6, Section 6, in accordance with the standard plans of the State Highway Department. **5.028 Miles**

Mercer County, Route 2—South Broad Street from Trenton City Line to northerly terminus of the White Horse Road and a part of State Highway Route, No. 2. **1.3 Miles**

Monmouth County, Route 4—That portion of Route No. 4, lying within the territorial limits of the Borough of Avon in the County of Monmouth aforesaid, namely Main Street, to such a width as shall be approved by the State Highway Commission, or any portion which may be agreed to between the Board of Chosen Freeholders of the County of Monmouth and the State Highway Commission.

That portion of Route No. 4, namely Riverside Avenue, from Bridge Avenue to Front Street, thence along Front Street to Maple Avenue, thence along Maple Avenue to Bergen Place, thence over new right of way along New York and Long Branch Railroad to Broad Street, all in the Borough of Red Bank in said County.

That portion of Route No. 4, namely beginning at the intersection of the Monmouth Road and its intersection with the Eatontown and Long Branch Boulevard, thence running southwardly through the Borough of West Long Branch to Cedar Avenue, thence eastwardly along Cedar Avenue to Norwood Avenue, to the south side of Roseld Avenue in the Borough of Deal, N. J.

That portion of Route No. 4, namely beginning at the junction of Sea Girt Avenue on Route No. 4 with Parker Avenue and running thence along Sea Girt Avenue to its intersection with Broad Street in the Borough of Manasquan. **5.5 Miles**

Ocean County—(A) Starting at a point on said Route No. 4 in the Borough of Point Pleasant Beach, Ocean County, at the Manasquan River and extending on said Route toward Lakewood a distance of one mile.

(B) Starting at a point on said Route No. 4 in the township of Brick, Ocean County, at the Post Office in

the Village of Laurelton and extending toward Lakewood a distance of four miles;

(C) Starting at a point on said Route No. 4 in the Township of Lakewood, Ocean County, at or near the intersection of Main Street and Madison Avenue and extending toward Toms River a distance of one mile;

(D) Starting at a point on said Route No. 4 in the Township of Dover, Ocean County, at the intersection of the highways at the Cemetery, north of the Village of Toms River and extending toward Tuckerton, a distance of one and one-half miles;

(E) Starting at a point on said Route No. 4 in the Township of Union, Ocean County, and extending through the Village at Barnegat a distance of one mile;

(F) Starting at a point on said Route No. 4 in the Borough of Tuckerton, Ocean County, and extending through the Borough of Tuckerton, a distance of one and one-half miles. **10 Miles**

Passaic County, Route 11—That portion of Route 11, Main Street in the County of Passaic. **1 Mile**

Salem County, Route 6—That portion of Route 6 which lies between Salem and Marlboro. **3 Miles**

Pavement, **3 Miles**
Grading, **6½ Miles**

The unfinished portion of Route 6, which lies between Salem and Woodstown. **5 Miles**

Somerset County, Route 9—What is designated as Route No. 9 from Middlesex Borough to the easterly borough line of Somerville, a distance of approximately 4.5 miles; also that portion of the State Highway System, Route No. 16, from the westerly end of the cement pavement at Douglas Avenue, Mine Brook, through the Borough of Fair Hills to Bedminster, thence to Somerville via Pluckamin to Route No. 9 at West End Avenue, Somerville, a distance of approximately 11.5 miles; also that portion of Route No. 9 from the corner of West End and Mountain avenues in the Borough of Somerville in a westerly direction to the North Branch River at North Branch a distance of approximately 4 miles; also that portion of Route No. 16, beginning at the corner of Main and Bridge Streets in the Borough of Somerville and extending in a southerly direction to the crossroads at Woods Tavern, a distance of approximately 4 miles. **22.3 Miles**

Warren County Route 9—(1) From the dividing line between the Town of Phillipsburg and the Township of Pohatcong and extending to the Hunterdon County line at Bloomsbury, being part of State Highway Route No. 9. (2) From the Musconetcong River, being the dividing line between Morris and Warren Counties at Mill Street, Hackettstown, N. J., and extending to the intersection of the road leading to Hope at Great Meadows, part Route No. 5. **12 Miles**

Salem County, Route 6—The unfinished portion of Route No. 6, which lies between Shirley and Oldman's Creek. 1923 reimbursement. **6.812 Miles**

Cumberland County, Route 6—That portion of Route 6 of the State Highway System beginning at the dividing line between the Township of Deerfield and the City of Bridgeton, and extending southerly, over what is commonly known and designated as North Pearl Street, a distance of approximately one-half mile to a point one thousand feet south of where the Central Railroad Company's tracks cross said North Pearl Street. 1922 reimbursement.

Somerville, Routes 9 & 16—That portion of Route No. 9, known as Main Street, and Route No. 16, known as Bridge Street. **0.8 Mile**

Bridgeton, Routes 6 & 15—That portion of Route 5 and Route 15 on East and West Commerce Street, Bridgeton. **2.4 Miles**

Plainfield, Route 9—The section of Route No. 9 of the State Highway in the City of Plainfield between Plainfield Avenue and the southwesterly city line. **2.5 Miles**

Elizabeth, Route 1—Rahway Avenue (Portion of State Highway Route No. 1) from the southerly city line of the City of Elizabeth to Cherry Street. **1.02 Miles**

We're here because—

We're here because—

We're here because

We're HERE!

Second Annual Convention of the New Jersey State Highway Association

Meetings Will Be Held Every Morning In
The Assembly Room, Hotel Stacey-Trent, Trenton

The Banquet will be held at the Stacey-Trent Hotel in the Evening of the 16th,
at 6.30 P. M.

Reservations for the Banquet should be sent at once to
Mr. A. Lee Grover, Chairman Committee on Arrangements

A good feed and a big time—Plan *Now* to be there!

Committee on Dinner

J. Bragg, Chairman
Fishberg, Secretary
Sullivan Martin
Hall Wildblood

Committee on Emblem

Moore, Chairman
Fishberg, Secretary
Johnson Tyman
Shinn Woodruff

SPECIAL NOTICE!

Contractors and Material Men are invited to attend at the same subscription price
the Members of the Association

“Dragon” Cement Measures Up Both Ways

“In selecting a cement”, says John C. Trautwine, Jr., “a reputation gained by years of successful use and experiment is of greater value than the results of a few tests.”

In June, 1921, thousands of barrels of *Dragon* Portland Cement were used in

the construction of concrete highways in New Jersey.

Every sample of Dragon Cement tested by the State Highway Department for this purpose was accepted. THERE WAS NOT A SINGLE REJECTION.

“For cement you can depend on—use Dragon”

IN USE SINCE 1889
 **Dragon**
PORTLAND CEMENT

LAWRENCE CEMENT CO.

PHILADELPHIA

302 Broadway, NEW YORK

The Highwayman



Above: Tank wagon spraying "Tarvia-X" under steam pressure with special Barrett nozzle.

Left: Brighton Plant, Rochester, N. Y., with loading lines for tank cars and motor trucks. Right: Tarvia Service Station at Syracuse, N. Y., completely equipped to ship in tank cars, motor trucks or barrel lots.

Service!

CALL on our Special Service Department regarding your road problems or the conditions in your vicinity. We gladly put the skill and experience of our engineers at your disposal. This service is free for the asking. If you are interested in *better roads* and *lower taxes*, here is an organization that can be of real service to you.

Tarvia—When you want it

In road work, building or repair, nothing is more important than having material on hand *when* it is wanted. Delays and holdups on delivery are expensive. Tarvia Service can be depended upon. Tarvia Service is always "on the job."

Tarvia—Where you want it

Back of Tarvia Service stands the great Barrett organization with its branches, placed all over the U. S. These branches are strategically located to afford efficient centers of distribution. You can always get Tarvia *where* you want it.

Tarvia—How you want it

Tarvia can be delivered by tank car, motor truck, tank wagon or in barrels. As a rule, Tarvia motor truck service is available within 40 miles of any Barrett Service Station or plant. When the size of the job warrants, motor trucks may be furnished at any distance from the plant or service station, the trucks operating from tank cars placed on sidings.

Motor truck distribution is faster and well worth the slight increase in price necessary to cover the use of the trucks, but equally good results may be obtained with the tank wagon—Barrett nozzle method—as shown in small illustration above.

Simply specify *how* you want Tarvia delivered—we'll do the rest.

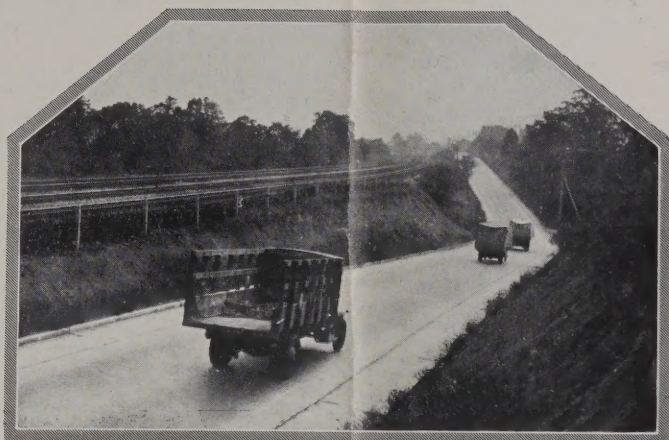
Tarvia

*For Road Construction
Maintenance and Repair*

TARVIA is a coal tar preparation made in a number of grades to meet varying road conditions. It is the most popular road material in America and has solved the problem of low cost, traffic-proof roads and pavements for hundreds of towns throughout the country.

Booklets free on request

The *Barrett* Company Offices in
NEW YORK, PHILADELPHIA, BOSTON
and Other Principal Cities



Lincoln Highway, Middlesex County, N. J. (Courtesy Portland Cement Association)

“Here’s the Bond — but Where’s the Road”

That’s a famous question—but you never heard it asked about a road made with VULCANITE.

No Sir! *Vulcanite* roads *stay* right because Vulcanite Cement is *made* right.

Our plant at Vulcanite (Warren Co.) has a capacity of *two million* tons a year.

“Let’s get together and talk cement”

VULCANITE PORTLAND CEMENT CO.

PHILADELPHIA

BOSTON

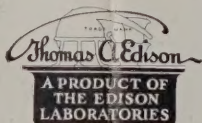
NEW YORK

Why *you* should make a note of the fact that *we* are still making cement

Operations on road jobs have ceased. But our cement production *goes right on*. Twenty-four hours every day, our big plant at New Village, New Jersey, is still operating.

The *reason* is—

*That we may be in a position to make
“immediate shipment in any quantity,
when YOU are rushed next season.*



EDISON PORTLAND CEMENT CO.

NEW YORK

BOSTON

PHILADELPHIA

ALONG THE ROAD



"Color Signals"

Another Big Aid to Motorists

As you know from your "ROAD TIPS" it is the purpose of the Highway Department to mark all roads in such a way that the traveler can tell at all times in just *what direction* he is going—north, south, east or west, or in between.

To accomplish this, poles along the important roads are being "banded" as rapidly as possible. The colors employed to indicate how the roads run are as follows:

Blue—North and south.

Red—East and west.

Brown—Northeast and southwest.

Yellow—Southeast and northwest.

Moreover, *two bands in succession* indicate a turn ahead.

The photograph below shows one of the new color-band signals; in this case a yellow band, indicating that the road runs northwest and southeast. The narrow white borders at top and bottom are employed to make the signal more readily seen.

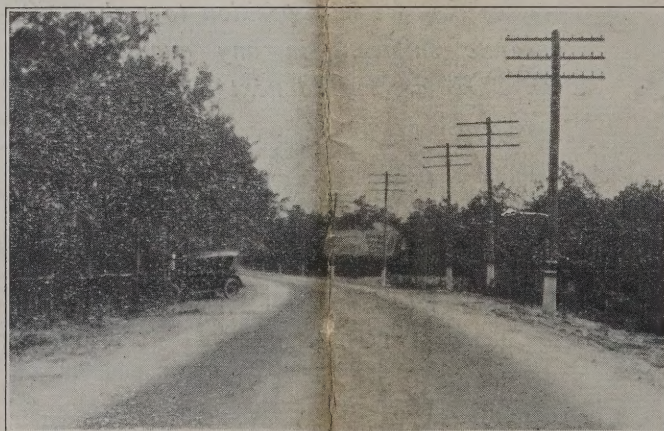


Where Accidents Occur

Every auto driver in this state should read carefully the report of road accidents made by the Maryland State Roads Commission.

"Most highway accidents occur on long stretches of road instead of at the curves, and are due to reckless driving", says the report.

Keep that in mind the next time you are tempted to "step on the gas" beyond the safety limit, by a long stretch of good road.



NOTE THE COLOR BANDS!

In this case its yellow, indicating that the road runs diagonally N. E. and S. W. (White Horse Pike, Absecon-Egg Harbor)

Concrete Philosophy

BY

CORDUROY IKE



CORDUROY IKE

The Concrete (headed) Philosopher. He's been wanting his photo printed. We'll get around to everybody in time

If there was a law to distribute cars according to size of families, a lot of folks with Fords would be riding in Packards; and *vice versa*.

To judge by the results of experience so far, it seems to be about as easy to invent a "chemical substitute for gasoline" as it is to invent a chemical substitute for razors. The hair keeps on growing, and the gasoline burning.

A lot of the guys who objected to the "extravagance" of building a bridge across the Delaware have already begun to mark up their properties.

Now that Chief Tom Wasser has got the whole darn Highway Department organized, down to the last shovel, for a record-breaking snow removal stunt—it looks like there isn't gonna be no snow. Ain't Nature mean?

It's not the *mileage* that takes the life out of your car, it's the churning, churning, churning, on the soft dirt roads.



A New One on the Cop

When a lady who was "burning up the road" on the boulevard was overtaken by a traffic officer and motioned to stop, she indignantly said:

"What do you want with me?"

"You were running forty miles an hour," answered the officer.

"Forty miles an hour? Why, officer, I haven't been out an hour," said the lady.

"Go ahead," said the officer. "That is a new one on me."

Road Tips



MONTHLY BULLETIN OF DETOURS

Adopted by the New Jersey State Highway Commission
Corrected to January 1, 1922

All detours posted with signs and blazed with "Arrows"

(Color signals to right will be used along all State roads as soon as possible.)

ROUTE NO. 1—Rahway-Elizabeth: Union County

Detour through Rahway will not be used after December 15th, when Route No. 1 will be open to Chestnut Street, Roselle. Thence over Chestnut Street to Route No. 9 at Roselle Park and thence over Route No. 9 to Elizabeth.

ROUTE NO. 4—Red Bank-Eatontown: Monmouth County

Road open to traffic.

ROUTE NO. 4—Absecon-Smithville: Atlantic County.

Road open to traffic.

ROUTE NO. 5—Budd Lake to Hackettstown: Morris County

Not necessary to detour. New construction is completed along line of the old road. Present construction being along new right of way.

Local roads are in bad condition.

ROUTE NO. 6—Mullica Hill-Bridgeton: Gloucester, Salem, Cumberland Counties

Detour has been abandoned and road opened to all traffic.

ROUTE NO. 6—Woodstown-Salem: Salem County

Road open to traffic.

ROUTE NO. 8—Sussex-Unionville: Sussex County

Not necessary to detour, as the present road will be kept open and maintained for traffic during construction.

ROUTE NO. 9—Perryville to West Portal: Hunterdon County

Via Clinton, Glen Gardner, Hampton, Asbury, West Portal.

ROUTE NO. 10—Arcadian Way to Fort Lee Ferry: Bergen County

Not necessary to detour as entire construction is over new right of way.

ROUTE NO. 12—Denville-Parsippany-Pine Brook: Morris County

Denville, Tabor, Morris Plains, Morristown, Whippany, Hanover, Livingston, Roseland, Essex Falls, Caldwell and Pine Brook.

ROUTE NO. 12—Phillipsburg to Port Colden: Warren County

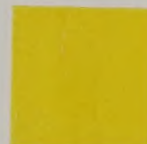
Via Phillipsburg, Bloomsbury, West Portal, Asbury, Washington and Port Colden.



This color [blue] on posts or signs indicates that road is running *North* and *South*



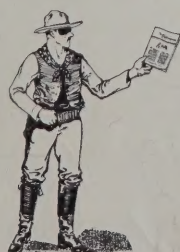
Red shows that it lies *East* and *West*



While yellow tells you that it takes a *diagonal* course *south-east* or *north-west*



And brown indicates that it takes a *diagonal* course *north-east* or *south-west*



For You — "The Highwayman"

Do you use roads? Do you want to know where they are being built, and what detours to take, each month?

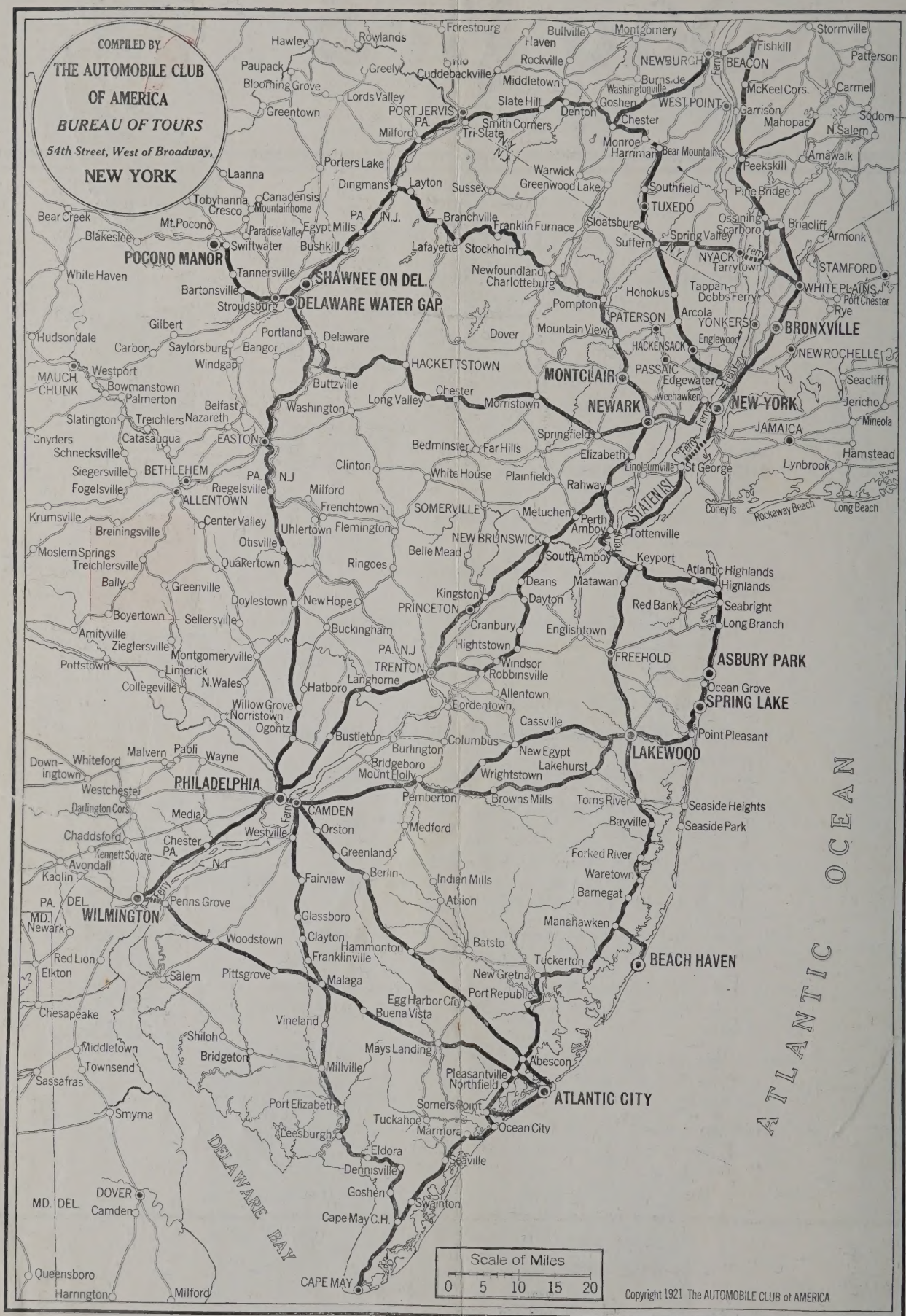
Then send, TODAY, to

The Highwayman
New Jersey State Highway Department
Trenton, N. J.

Just ask to be put on The Highwayman's list. A postal will do.

Turn Over!

On the Back You'll Find the Map.



Reproduced by courtesy of the Automobile Club of America.